Investment Fundamentals

A Foundation for Prudent Investing

FINANCIAL FREEDOM HOUSE

CFX10319

Financial Freedom House is a federally registered and CEFEX-certified Investment Adviser that utilizes TD Ameritrade as an independent and unaffiliated custodian for client accounts.

We Do What Others Imply℠
Providing fiduciary services since 1983

20210405

Public Image of Successful Investing

Advertising Manipulates Investors' Fear and Greed

Asset Classes

Peer Group Descriptions and Applicable Index

Large Cap Blend (S&P 500)	A blended index which measures the performance of 500 widely held growth and value stocks in US equity market.
Large Cap Growth (Russell 1000 Growth)	A US stock market index made up of large companies higher price-to-book ratios and higher expected future growth. Average market cap is $289B.
Large Cap Value (Russell 1000 Value)	A US stock market index made up of large companies lower price-to-book ratios and lower expected future growth. Average market cap is $122B.
Small Cap Blend (Russell 2000)	A US stock market index of approximately 2,000 "small" companies with an average market cap of $2.4B.
International Equity (MSCI World ex USA)	An international equity index which includes a collection of stocks from all the developed countries, excluding the USA.
Emerging Equity (MSCI Emerging Markets)	Measures the performance of equities in 23 emerging markets including Brazil, Chile, China, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, Taiwan, Turkey….
US Bonds (Bloomberg Barclays US Aggregate Bond)	An intermdiate term investment grade bond index which includes treasury securities, government agency bonds, mortgage-backed bonds, corporate bonds, and a small amount of foreign bonds traded in U.S.
US Real Estate (Dow Jones US Select REIT)	Tracks the performance of publicly traded REITs and REIT-like securities in the USA and is designed to serve as a proxy for direct real estate investment.
Commodities (Bloomberg Commodity Total Return)	A broad market commodity index covering over 20 commodity sectors.
Balanced Strategy (60 Equity/40 Bonds)	A moderate portfolio comprised of 42% US Equity (Stock), 18% International Equity (Stock), and 40% US and Global Fixed Income (Bonds).

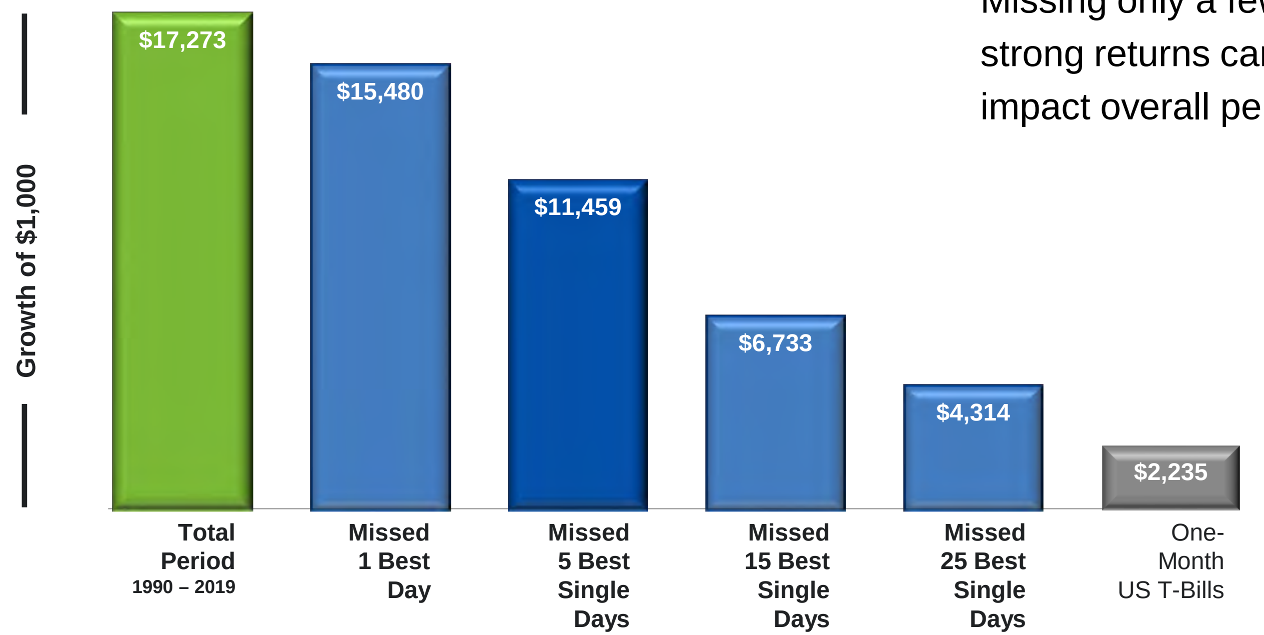
Asset Class Returns

A 20-Year Snapshot – the best and worst performing asset classes each

																				Annualized Rate of Return		
1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	5 Years	10 Years	20 Years
Emerging Mkts 66%	Commodities 32%	Real Estate 12%	Commodities 26%	Emerging Mkts 56%	Real Estate 33%	Emerging Mkts 35%	Real Estate 36%	Emerging Mkts 40%	US Bonds 5%	Emerging Mkts 79%	Real Estate 28%	Real Estate 9%	Emerging Mkts 19%	Small Cap Blend 39%	Real Estate 32%	Large Cap Growth 6%	Small Cap Blend 21%	Emerging Mkts 38%	US Bonds 0%	Large Cap Growth 10%	Large Cap Growth 15%	Real Estate 10%
Large Cap Growth 33%	Real Estate 31%	US Bonds 8%	US Bonds 10%	Small Cap Blend 47%	Emerging Mkts 26%	Commodities 21%	Emerging Mkts 33%	Commodities 16%	Balanced 60/40 -25%	Large Cap Growth 37%	Small Cap Blend 27%	US Bonds 8%	Large Cap Value 18%	Large Cap Growth 34%	S&P 500 14%	Real Estate 5%	Large Cap Value 17%	Large Cap Growth 30%	Large Cap Growth -2%	S&P 500 9%	S&P 500 13%	Emerging Mkts 9%
Int'l Mkts 28%	US Bonds 12%	Balanced 60/40 4%	Real Estate 4%	Int'l Mkts 40%	Int'l Mkts 21%	Int'l Mkts 15%	Int'l Mkts 26%	Int'l Mkts 13%	Small Cap Blend -34%	Int'l Mkts 34%	Emerging Mkts 19%	Large Cap Growth 3%	Real Estate 17%	Large Cap Value 33%	Large Cap Value 14%	S&P 500 1%	S&P 500 12%	Int'l Mkts 25%	Real Estate -4%	Real Estate 8%	Small Cap Blend 12%	Small Cap Blend 7%
Commodities 24%	Large Cap Value 7%	Small Cap Blend 3%	Balanced 60/40 -4%	Real Estate 36%	Small Cap Blend 18%	Real Estate 14%	Large Cap Value 22%	Large Cap Growth 12%	Commodities -36%	Real Estate 29%	Commodities 17%	S&P 500 2%	Int'l Mkts 17%	S&P 500 32%	Large Cap Growth 13%	US Bonds 1%	Commodities 12%	S&P 500 22%	S&P 500 -4%	Large Cap Value 6%	Real Estate 12%	Balanced 60/40 7%
Small Cap Blend 21%	Balanced 60/40 5%	Emerging Mkts -2%	Emerging Mkts -6%	Large Cap Value 30%	Large Cap Value 17%	Balanced 60/40 9%	Small Cap Blend 18%	US Bonds 7%	Large Cap Value -37%	Small Cap Blend 27%	Large Cap Growth 17%	Large Cap Value 0%	Small Cap Blend 16%	Int'l Mkts 22%	US Bonds 6%	Balanced 60/40 -1%	Emerging Mkts 12%	Small Cap Blend 15%	Balanced 60/40 -6%	Small Cap Blend 4%	Large Cap Value 11%	Large Cap Value 6%
S&P 500 21%	Small Cap Blend -3%	Large Cap Value -6%	Int'l Mkts -16%	Large Cap Growth 30%	Balanced 60/40 15%	Large Cap Value 7%	Balanced 60/40 16%	S&P 500 6%	S&P 500 -37%	S&P 500 27%	Large Cap Value 16%	Balanced 60/40 -2%	S&P 500 16%	Balanced 60/40 16%	Small Cap Blend 5%	Int'l Mkts -3%	Balanced 60/40 11%	Large Cap Value 14%	Large Cap Value -8%	Balanced 60/40 4%	Emerging Mkts 8%	S&P 500 6%
Balanced 60/40 13%	S&P 500 -9%	S&P 500 -12%	Large Cap Value -16%	S&P 500 29%	S&P 500 11%	Large Cap Growth 5%	S&P 500 16%	Balanced 60/40 3%	Large Cap Growth -38%	Balanced 60/40 26%	S&P 500 15%	Small Cap Blend -4%	Large Cap Growth 15%	Real Estate 1%	Balanced 60/40 5%	Large Cap Value -4%	Large Cap Growth 7%	Balanced 60/40 11%	Small Cap Blend -11%	US Bonds 3%	Balanced 60/40 8%	Large Cap Growth 5%
Large Cap Value 7%	Int'l Mkts -13%	Commodities -20%	Small Cap Blend -21%	Balanced 60/40 28%	Commodities 9%	S&P 500 5%	Large Cap Growth 9%	Large Cap Value 0%	Real Estate -39%	Large Cap Value 20%	Balanced 60/40 14%	Int'l Mkts -12%	Balanced 60/40 12%	US Bonds -2%	Emerging Mkts -2%	Small Cap Blend -4%	Real Estate 7%	Real Estate 4%	Commodities -11%	Emerging Mkts 2%	Int'l Mkts 7%	US Bonds 5%
US Bonds -1%	Large Cap Growth -22%	Large Cap Growth -20%	S&P 500 -22%	Commodities 24%	Large Cap Growth 6%	Small Cap Blend 5%	US Bonds 4%	Small Cap Blend -2%	Int'l Mkts -43%	19%	Int'l Mkts 9%	Commodities -13%	US Bonds 4%	Emerging Mkts -2%	Int'l Mkts -4%	Emerging Mkts -15%	Int'l Mkts 3%	US Bonds 4%	Int'l Mkts -14%	Int'l Mkts 1%	US Bonds 4%	Int'l Mkts 4%
Real Estate -3%	Emerging Mkts -31%	Int'l Mkts -21%	Large Cap Growth -28%	US Bonds 4%	US Bonds 4%	US Bonds 2%	Commodities 2%	Real Estate -18%	Emerging Mkts -53%	US Bonds 6%	US Bonds 7%	Emerging Mkts -18%	Commodities -1%	Commodities -10%	Commodities -17%	Commodities -25%	US Bonds 3%	Commodities 2%	Emerging Mkts -14%	Commodities -9%	Commodities 0%	Commodities 2%

Risk of Poor Market Timing

Performance of the S&P 500 Index (1990 - 2019)



Missing only a few days of strong returns can drastically impact overall performance.

	Total Period 1990 – 2019	Missed 1 Best Day	Missed 5 Best Single Days	Missed 15 Best Single Days	Missed 25 Best Single Days	One-Month US T-Bills
Annualized Compound Return	9.96%	9.56%	8.47%	6.56%	4.99%	2.72%

In US dollars. For illustrative purposes. The missed best day(s) examples assume that the hypothetical portfolio fully divested its holdings at the end of the day before the missed best day(s), held cash for the missed best day(s), and reinvested the entire portfolio in the S&P 500 at the end of the missed best day(s). Annualized returns for the missed best day(s) were calculated by substituting actual returns for the missed best day(s) with zero. S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. “One-Month US T- Bills” is the IA SBBI US 30 Day TBill TR USD, provided by Ibbotson Associates via Morningstar Direct. Data is calculated off rounded daily index values. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Most Investors Underperform the Market

Excess Trading + Excess Costs

Annualized Investor Returns vs Benchmark (Data as of Dec 31, 2019)

	S&P 500 Index	Average Equity Fund Investor	Difference	Investor Underperformance Compared to Index
Last 20 years	6.06%	4.25%	(1.81)	**(29.87%)**
Last 10 years	13.56%	9.43%	(4.13)	**(30.46%)**
Last 5 years	11.70%	7.79%	(3.91)	**(33.42%)**
Last 3 years	15.27%	11.50%	(3.77)	**(24.69%)**

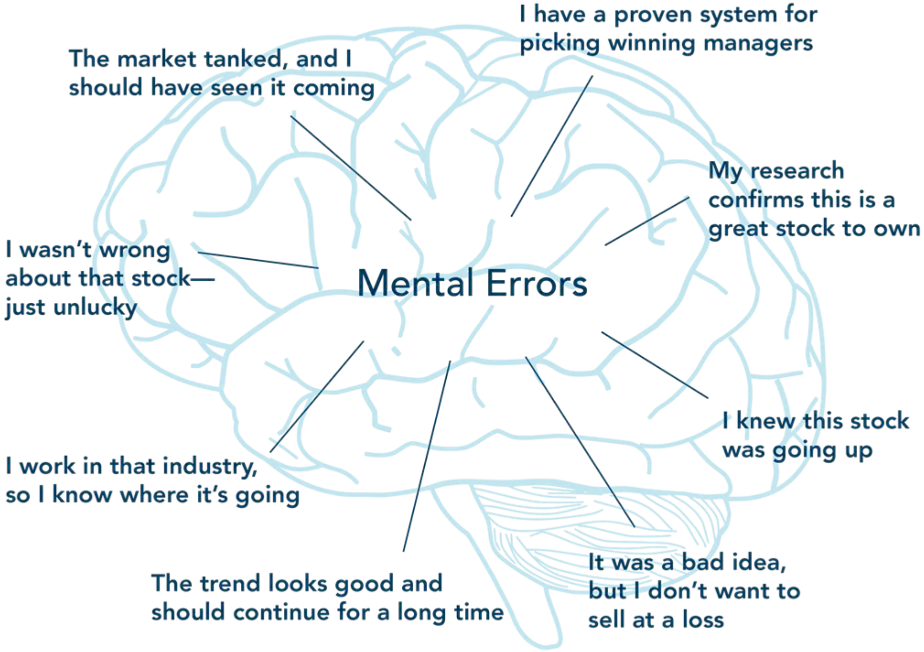
Quantitative Analysis of Investor Behavior 2020, Dalbar, Inc., 2020



Human Nature & Behavioral Economics

Humans Are Not Wired for Disciplined Investing

Natural Biases Can Lead to Faulty Reasoning and Poor Decisions



Anchoring or Confirmation Bias

People look for information that supports their thinking and avoid information that contradicts it.

Regret Aversion Bias

Also known as loss aversion, this describes wanting to avoid the feeling of regret if a decision might turn negative.

Familiarity Bias

This occurs when investors have a preference for familiar or well-known investments.

Self-attribution Bias

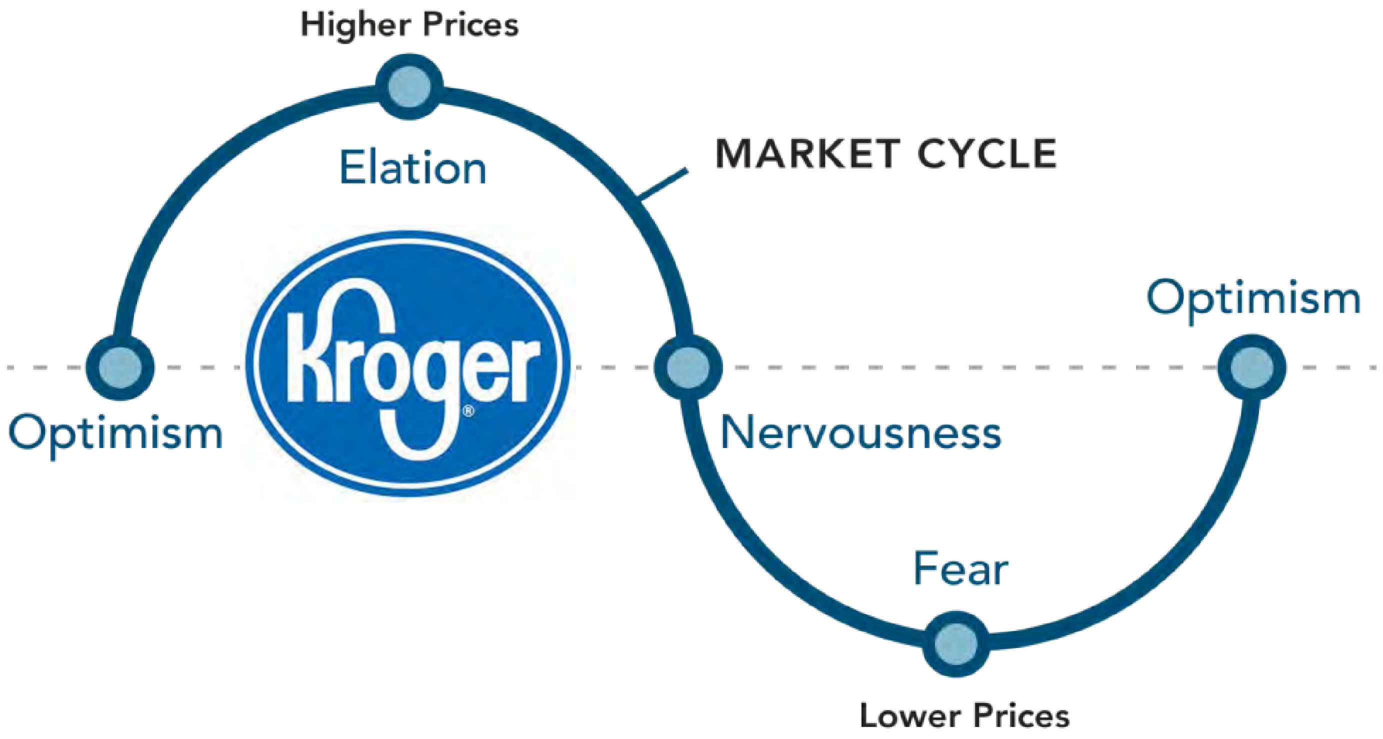
Investors who suffer from self-attribution bias tend to attribute successful outcomes to their own actions and bad outcomes to external factors.

Trend-chasing Bias

Investors often chase past performance in the mistaken belief that historical returns are a predictor of future returns.

Flawed Perspective During the Market Cycle

Groceries vs Investments





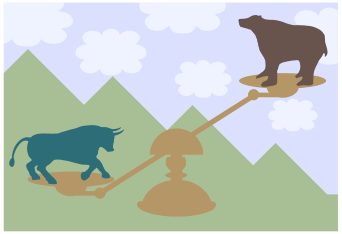
Active Investment Management

Traditional Approach Used by Wall Street

Pick the Winning Horse and Hit Home Runs

- Seeks to identify mispriced securities
- Uses forecasting, momentum, charting, and other techniques to try to time the market
- Attempts to find a pattern in the randomness of the market

> Active management can be beneficial within those market segments where the flow of information is not as readily available, widespread, or efficient.



Marketing of Actively Managed Funds

Many Groups Have Vested Interest

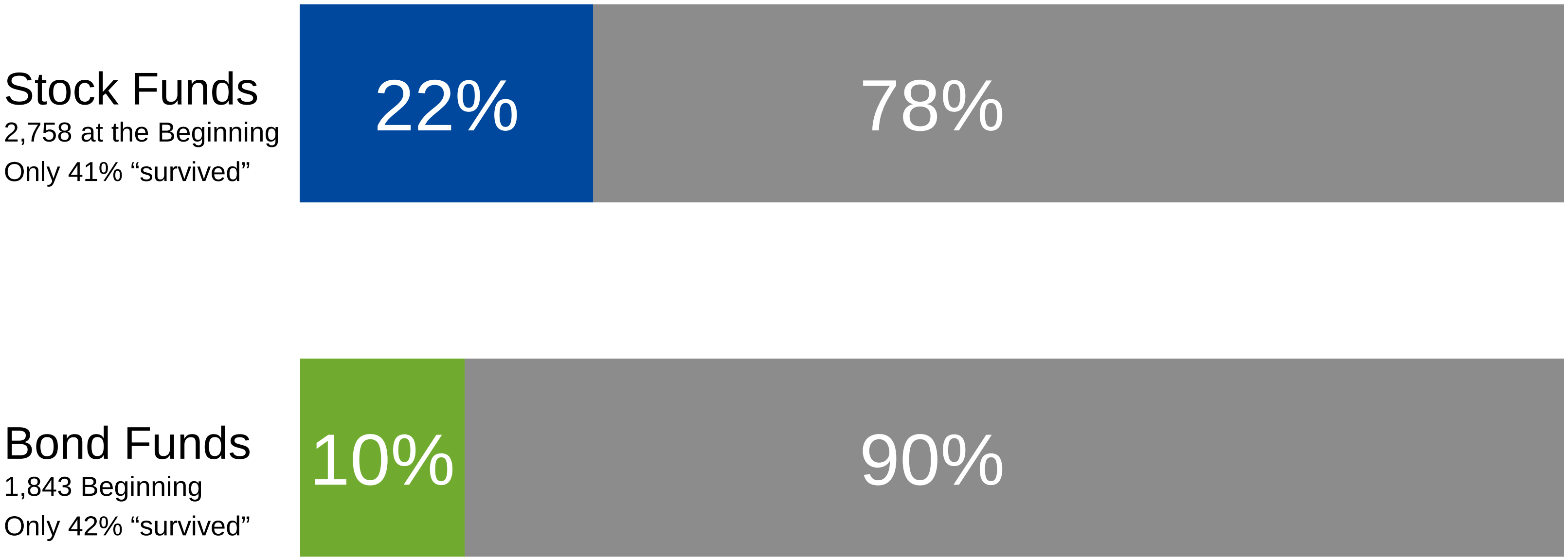
1. The value proposition of many firms and individual professionals is that they can beat the market

2. Trading fees generated by the trading inside of mutual funds is a large source of revenue for Wall Street

3. Media leverages fear, greed, and uncertainty to boost advertising
   - Magazines
   - Cable News
   - Radio Shows
   - Investment Newsletters

Most Mutual Fund Managers Don't Succeed

Only a Fraction of US-Based Funds Beat Their Benchmark 2000-2019

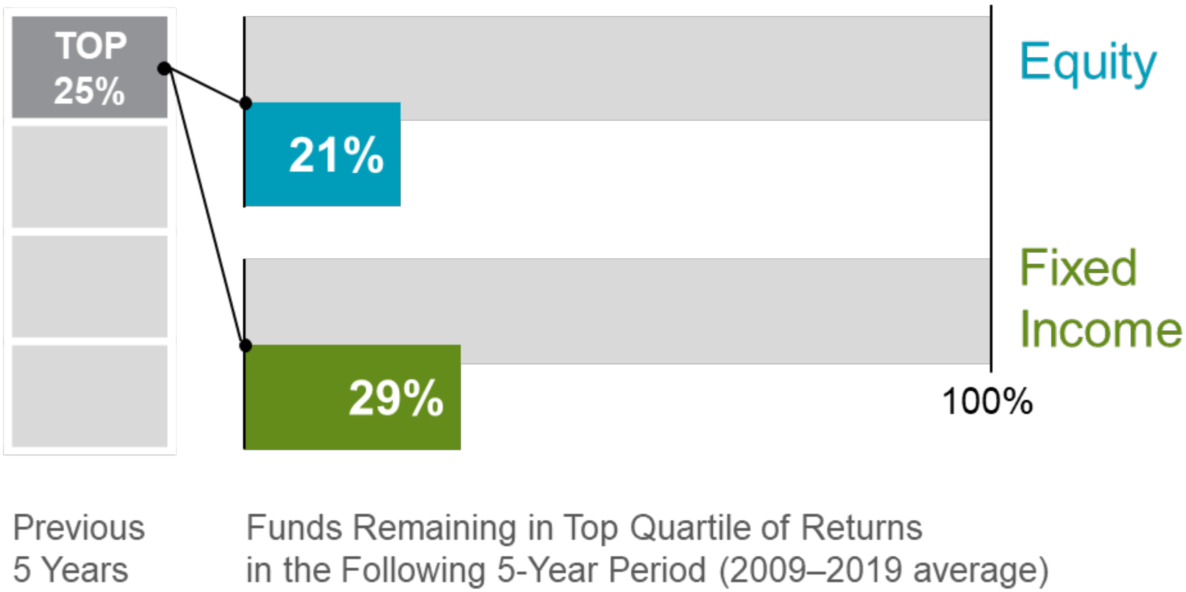


Analysis performed by Dimensional Fund Advisors. Beginning sample includes US-domiciled funds as of the beginning of the 20-year period ending December 31, 2019. The number of beginners is indicated below the asset class label. Outperformers (winners) are funds that had returns for every month in the sample period and outperformed their benchmark over the period. US-domiciled mutual fund data is provided by Morningstar. See Data Appendix for more information. Past performance is no guarantee of future results.

Most Winning Funds **Do Not** Continue Winning

Past Performance vs. Subsequent Performance of US-Based Equity Funds

Percentage of Top-Ranked Funds That Stayed on Top



Past performance offers little insight into a fund's future returns.

Most funds with a top quartile return for the previous five-years did not maintain a top-quartile ranking in the following five years.

This study evaluated fund performance persistence over rolling periods from 2000 through 2019. Each year, funds are sorted within their category based on their previous five-year total return. Those ranked in the top quartile of returns are evaluated over the following five-year period. The chart shows the average percentage of top-ranked equity and fixed income funds that kept their top ranking in the subsequent period. US-domiciled, USD-denominated, non-Dimensional open-end mutual fund data is provided by Morningstar. Equity fund sample includes the Morningstar historical categories: Diversified Emerging Markets, Europe Stock, Foreign Large Blend, Foreign Large Growth, Foreign Large Value, Foreign Small/Mid Blend, Foreign Small/Mid Growth, Foreign Small/Mid Value, Global Real Estate, Japan Stock, Large Blend, Large Growth, Large Value, Mid-Cap Blend, Mid-Cap Growth, Mid-Cap Value, Miscellaneous Region, Pacific/Asia ex-Japan Stock, Real Estate, Small Blend, Small Growth, Small Value, World Large Stock, and World Small/Mid Stock. Fixed income fund sample includes the Morningstar historical categories: Corporate Bond, High Yield Bond, Inflation-Protected Bond, Intermediate Core Bond, Intermediate Core-Plus Bond, Intermediate Government, Long Government, Muni California Intermediate, Muni California Long, Muni Massachusetts, Muni Minnesota, Muni National Intermediate, Muni National Long, Muni National Short, Muni New Jersey, Muni New York Intermediate, Muni New York Long, Muni Ohio, Muni Pennsylvania, Muni Single State Intermediate, Muni Single State Long, Muni Single State Short, Muni Target Maturity, Short Government, Short-Term Bond, Target Maturity, Ultrashort Bond, World Bond, and World Bond-USD Hedged. See Dimensional's Mutual Fund Landscape 2020 for more detail. Index data provided by Bloomberg Barclays, MSCI, Russell, FTSE Fixed Income LLC, and S&P Dow Jones Indices LLC. Bloomberg Barclays data provided by Bloomberg. MSCI data © MSCI 2020, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. FTSE fixed income indices © 2020 FTSE Fixed Income LLC. All rights reserved. S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Indices are not available for direct investment. Their performance does not reflect the expenses associated with management of an actual portfolio. There is no guarantee investment strategies will be successful. Past performance is no guarantee of future results.



Passive
Investment Management

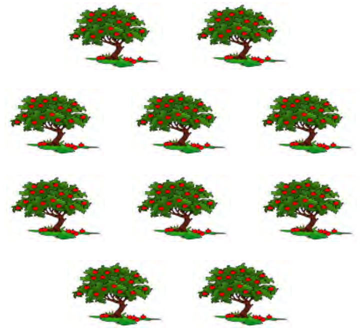
Which Option Would You Choose?

A

The Harvest of 10 Trees You Picked Out in the Spring

B

10% Share of the Harvest from an Orchard with 100 Trees?



C

1% Share of the Harvest from Multiple Orchards with 1,000 Trees

Academic Research and Innovations in Finance

1952
Diversification and Portfolio Risk

Harry Markowitz, PhD
University of California – San Diego
Nobel Prize in Economics, 1990

Diversification reduces risk.

An optimal portfolio can be constructed to maximize return for a given standard deviation.

1965
Behavior of Securities Prices

Paul Samuelson, PhD
MIT
Nobel Prize in Economics, 1970

Price changes follow random patterns. Future share prices are unpredictable.

1971
The Birth of Index Funds

John McQuown[1],
Wells Fargo Bank, 1971;

Rex Sinquefield,
American National Bank, 1973

Banks develop the first passive S&P 500 Index funds.

1981
The Size Effect

Rolf Banz, PhD
Northwestern University

Small companies have higher expected returns than large companies and behave differently.

2013
Profitability

Eugene Fama, PhD
Kenneth French, PhD
Robert Novy-Marx, PhD

Motivated by valuation theory, academic research identifies profitability as a new dimension of expected returns.

1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020

1964
Single-Factor Asset Pricing Risk/Return Model

William Sharpe, PhD
Stanford Univiersity
Nobel Prize in Economics, 1990

Capital Asset Pricing Model

A theoretical model for evaluating the risk and expected return of securities and portfolios.

1966
Efficient Markets Hypothesis

Eugene F. Fama, PhD
University of Chicago
Nobel Prize in Economics, 2013

Security prices reflect values and information accurately and quickly.

It is difficult if not impossible to capture returns in excess of market returns without taking greater than market levels of risk.

1973
A Random Walk Down Wall Street

Burton Malkiel, PhD
Princeton University

Asset prices typically exhibit signs of random walk and one cannot consistently outperform market averages.

1993
Multifactor Asset Pricing Model and Value Effect

Eugene Fama, PhD
Kenneth French, PhD

Improves on the single-factor asset pricing model (CAPM).

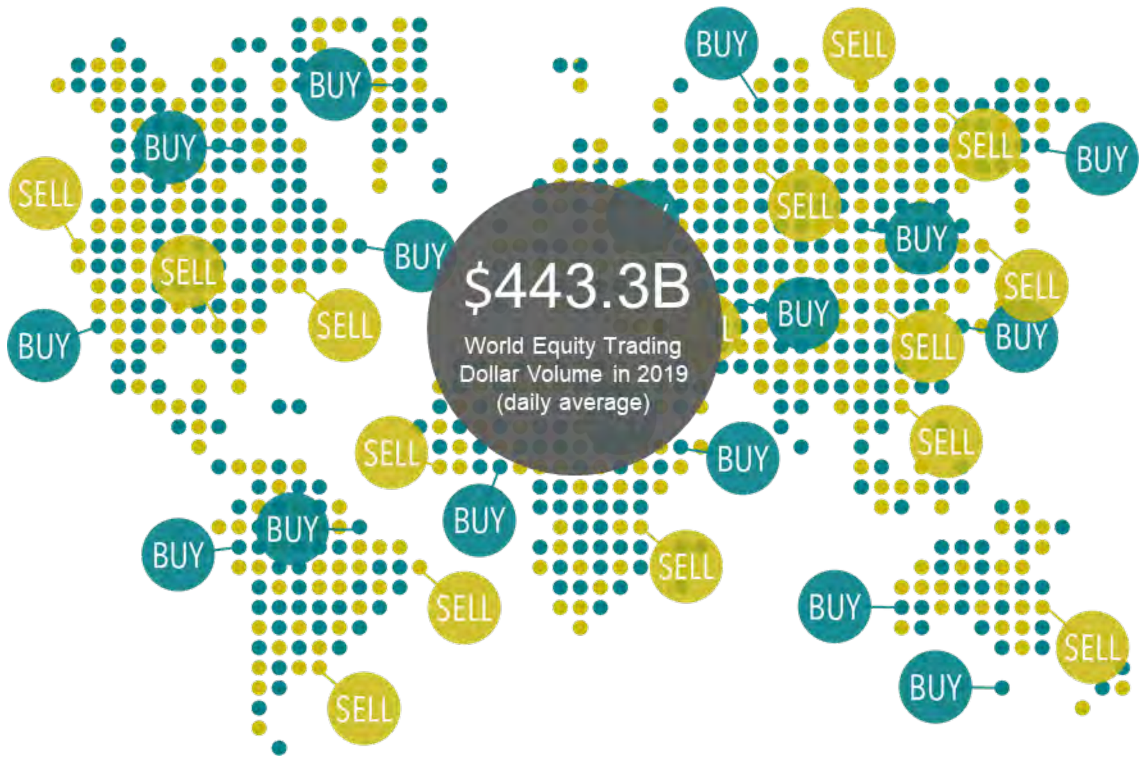
Identifies market, size, and "value" factors in returns.

Develops the three-factor asset pricing model, an invaluable asset allocation and portfolio analysis tool

Markets Reflect the “Knowledge” of All Investors

The market effectively enables competition among many market participants who agree to transact with one another.

This trading aggregates a vast amount of dispersed information and drives it into security prices.



In US dollars. Source: Dimensional, using data from Bloomberg LP. Includes primary and secondary exchange trading volume globally for equities. ETFs and funds are excluded. Daily averages were computed by calculating the trading volume of each stock daily as the closing price multiplied by shares traded that day. All such trading volume is summed up and divided by 252 as an approximate number of annual trading days.

The Efficient Markets Hypothesis

Eugene Fama, PhD, 1966

1. Current prices of investments incorporate all available information and expectations of market participants.

2. Current prices are the best approximation of intrinsic value.

3. "Mis-pricings" can occur but not in predictable patterns that can lead to consistent outperformance.

Eugene Fama, PhD
is one of 3 Nobel Laureates
serving on the
Academic Leadership Team
at Dimensional Funds

Examples

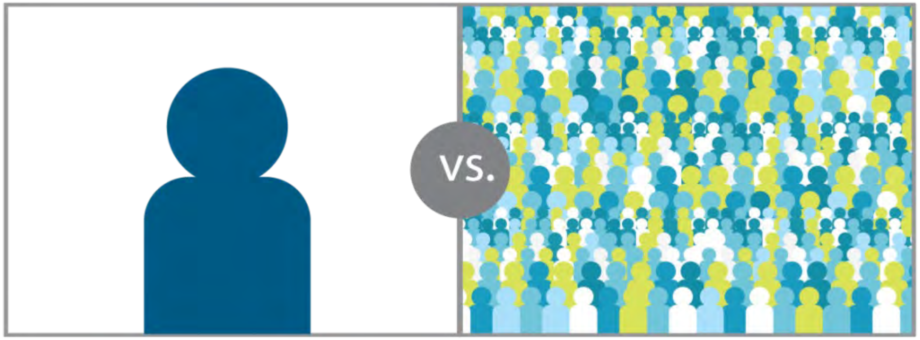
- Public information about corporate decisions and events are known instantly around the world
- The market's non-reaction to events such as the government shutdown, fiscal cliff, and elections
- Warren Buffett doesn't always win, he just has a lot of money

Eugene F. Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work," *Journal of Finance* 25, no. 2 (May 1970): 383-417.
Eugene F. Fama, "Foundations of Finance," *Journal of Finance* 32, no. 3 (June 1977): 961-64.

Be the Market, Don't Try to Beat the Market

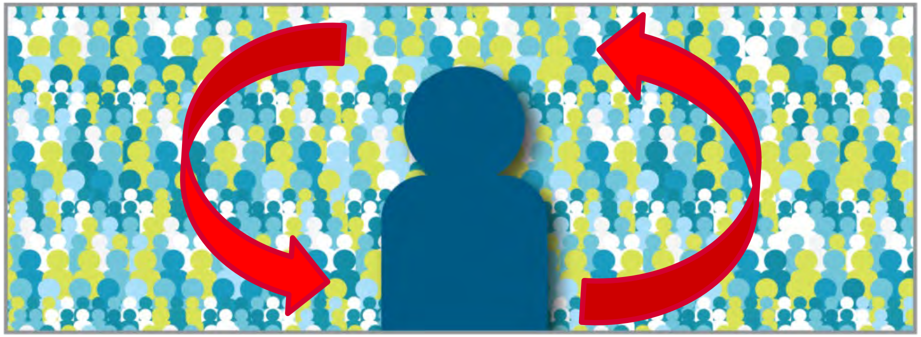
When you try to outwit the market,

you compete with the collective knowledge of millions of investors.



By harnessing the market's power,

you put this collective knowledge to work in your portfolio.



Together, We Know More Than We Do Alone

Participants were asked to estimate the number of jelly beans in a jar.

Range of Guesses: 409 to 5,365

Average Guess: 1,653

Actual # of Jelly Beans: 1,670

Source: Dimensional Fund Advisors - Illustration based on voluntary participation at client event hosted by a financial advisor, August 2013. Results audited by advisor.

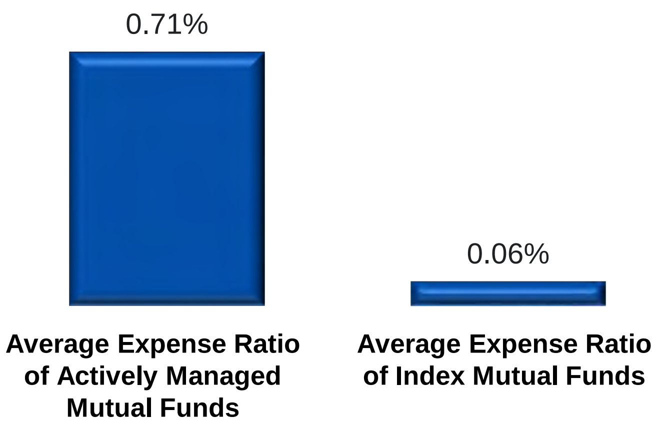
High Management Expenses are a Drag

Mutual Fund Performance is Reported Net of Internal Fund Expenses

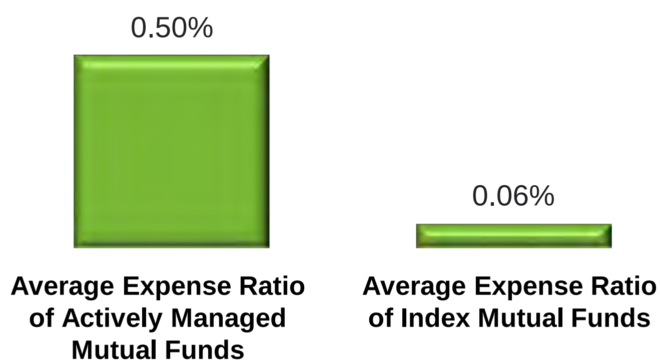
“After costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar for any time period.”

— William F. Sharpe, 1990 Nobel Laureate

Equity Mutual Funds



Fixed Income Mutual Funds



William F. Sharpe, “The Arithmetic of Active Management,” Financial Analysts Journal 47, no. 1 (January/February 1991): 7-9.
Mutual fund expense ratios - “Trends in the Expenses and Fees of Funds, 2019”, Investment Company Institute (March 2021, VOL . 27, No 3)

Not All Index Funds are Alike

Cost is a Key Determinant of Performance

	Vanguard 500 Index Adm (VFIAX)	T Rowe Price Equity Index 500 (PREIX)	BNY Mellon S&P 500 Index (PEOPX)
Expense Ratio	0.04%	0.19%	0.50%
Cost per $10,000	$4	$19	$50
5-Year Annualized Return of Fund	10.69%	10.51%	10.17%
5-Year Annualized Return of S&P 500 Index	10.72%	10.72%	10.72%
Performance of Fund vs Index	**(0.03%)**	**(0.21%)**	**(0.55%)**

Morningstar Performance Data as of June 30, 2020

The Rationale Supporting Passive Management

1. Markets are efficient
2. It is difficult to predict the future
3. Someone will get lucky, but not with any consistency over time
4. High fees are a drag on performance
5. Low turnover reduces trading costs
6. Low turnover improves tax efficiency

Focus on What You Can Control

- Create an investment plan to fit your needs and risk tolerance.
- Structure a portfolio that incorporate a range of asset classes with different yet complimentary risk-return profiles.
- Diversify globally.
- Manage expenses, turnover, and taxes.
- Stay disciplined and avoid emotional reactions through market dips and swings.

We Can Help You If You'd Like Our Help

Disclosures

The presentation is educational in nature and provides general information regarding retirement planning and FFH's financial planning process. It is not, however, intended to provide specific investment, legal, or tax advice.

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CEFEX charges a fee to cover costs related to the initial and annual certification audit. FFH's fee for the initial certification audit in 2016 was $5,000 plus travel costs and the fee for annual recertification audits has ranged from $2,000 to $4,000 plus travel costs. The fees paid do not have any bearing on the outcome of the audit or the determination of the CEFEX Registration Committee. Furthermore, FFH did not pay any additional fees after receiving certification in order to use the CEFEX mark or otherwise to refer to its certification.

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FINANCIAL
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